

Dynamic state-of-charge indicator for a battery and method thereof

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A dynamic state-of-charge indicator for a storage battery characterized by a discharge curve relating available energy of the battery to a contemporaneous voltage over a range of voltage boundaries having predetermined end points corresponding to fully charged and effectively discharged for one charge cycle. The indicator includes a microprocessor for storing predetermined relationships between the contemporaneous voltage and the state-of-charge of the battery. A voltage sensor and a current sensor are connected to monitor battery voltage and current flow, respectively, and to provide corresponding voltage and current signals to the microprocessor. The microprocessor periodically computes the internal resistance of the battery, the average voltage and current for a predetermined discharge time period and a corrected voltage as a total of internal resistance voltage loss and average voltage with the state-of-charge being determined as a function of the corrected battery voltage.

